

At PPPL THIS WEEK

MAY 4-7

**Plasma Material Interface
Workshop**
Lab-wide

MAY 5-6

**EU-US ITER Diagnostic
Engineering Workshop**
Director's Conference Room

MAY 5-7

Tritium Focus Workshop
MBG Auditorium

WEDNESDAY, MAY 6

Colloquium
4:15 p.m. ♦ MBG Auditorium
Metamaterials
Professor Gennady Shvets, The
University of Texas at Austin

UPCOMING

FRIDAY, MAY 15

**Remembrances of
Val Logsdon Fitch**
Princeton University Physics
Department
[See page 6 for more information.](#)

Open Public Tour
10 a.m.
[Email tours@pppl.gov](mailto:tours@pppl.gov)

INSIDE

Plasma-Materials Workshop **2**

Head of Technology Transfer **3**

Communiversality **5**

Val Logsdon Fitch memorial **6**

Menu **7**

Laurie Bagley succeeds Lew Meixler as head of Technology Transfer

By Jeanne Jackson DeVoe

When Lew Meixler heard that Laurie Bagley, who was then working as a technology licensing assistant at Princeton University, was looking for a job, he was delighted. He had the perfect job for her: his job. Meixler was planning to retire and thought Bagley would be the ideal candidate to fill the position.

Bagley became the head of Technology Transfer in March. Meixler retired after nearly 40 years at PPPL but will work part-time for six months to help with the transition. "I think she'll bring new ideas and energy to the job," Meixler said. "I think she'll be very proactive in marketing our technologies and capabilities and I think people will find her very easy to work with and very collegial."

"Laurie is a great addition to the staff," said John DeLooper, head of Best Practices and Outreach, who is Bagley's supervisor. "She has great experience and connections by way of working for main campus and she's enthusiastic about her new task at the Laboratory."

[continued on page 3](#)

PPPL hosts workshop on taming plasma- materials interactions

By John Greenwald

More than 80 physicists from around the country are gathering at PPPL this week for a workshop on one of the top challenges to magnetic fusion energy: Taming the interactions between the superhot, charged plasma gas that fuels fusion reactions and the interior walls of a tokamak.

Interactions with plasma can damage tokamak walls and kick up impurities that halt fusion reactions. Controlling such interactions will be crucial to the future of the U.S. fusion program and to the international fusion experiment ITER, which is under construction in France and is sending representatives to the workshop.

[continued on page 2](#)

PPPL's Communiversality exhibit is a hit with the crowd



Atiba Brereton talks to a group of children at Communiversality.

[continued on page 5](#)

Plasma-Materials Workshop

continued from page 1

“We’re getting together to discuss and debate the key problems that need to be solved in plasma-materials interactions, and the possible solutions to them,” said physicist Rajesh Maingi, overall chairman for the three-and-a-half day workshop that begins on Monday; nuclear engineer Steve Zinkle of the University of Tennessee serves as co-chairman. Working with Maingi on local organization for the event has been physicist Charles Skinner, with administrative support from Terry Greenberg and Pam Hampton.

The PPPL session is one of four workshops on high-priority fusion issues that are being held this spring at sites around the country. Other sessions will cover plasma science frontiers, integrated magnetic fusion simulations, and transient heat fluxes in tokamak plasmas. The gatherings “will help guide the planning of future research and allocation of resources,” according to the U.S. Department of Energy’s Office of Fusion Energy Sciences (FES), which called for the workshops.

Attendees have submitted 75 white papers for the PPPL session and plan to deliver 56 talks. Discussions will be held on a workshop-wide basis and in four subgroups. These will consider methods of addressing plasma-materials

interactions through projects based on existing fusion devices, international collaborations, theory and computation, and new devices. Each subgroup will write a chapter of the workshop’s report. “Our task is to identify the top problems and solutions for the plasma-materials interactions without attempting to prioritize them,” said Maingi.

Leaders of the workshop will present their report to a community-wide forum of fusion researchers and engineers working on plasma-interaction issues. The forum will likely be held as a Webinar in mid-June, with a written report on the workshop and community response to be delivered to FES by June 30. 📄



Rajesh Maingi

Earth Week nature walk



PPPL’ers visited the National Audubon Society’s Plainsboro Preserve for a brief nature walk on April 24 in honor of Earth Week. Anna Wright-Piersanti, second from left, a teacher naturalist, led the group on a tour. From left to right: Mark Swanek, Alba Castano, Virginia Finley, Mark Hughes, Jeanne Jackson DeVoe and Terry Greenberg, far right.

Head of Technology Transfer

continued from page 1



Laurie Bagley

Lew Meixler

Bagley says her main focus in the job is to offer help and encouragement to people inventing new technologies at PPPL, including non-scientists and engineers as well as the research staff. Once she finds out what technologies are being developed, she will reach out to people outside PPPL who might want to invest in or use the technology. They could include people working in research and development at companies, investors, and researchers at other universities and national laboratories.

Communications the number one skill

"I think communication is probably the number one skill for the job," Bagley says. "To reach out, not be afraid to make connections, and follow up is a big piece of it."

Bagley worked closely with Meixler on technologies at PPPL and was familiar with the Laboratory through her work with the University. She said it's been helpful to have Meixler remain at PPPL part-time for six months. "He's been a great mentor," Bagley said. "I'm very grateful that he's staying on."

Dozens of inventions

Meixler began as an electrical engineer at PPPL in 1975 and became head of Technology Transfer in 1991. He brought his engineering expertise and personal touch to the job for 23 years. One example is his work with researcher Lenore Rasmussen. As head of the Plasma Surface Technology Laboratory at PPPL, Meixler worked with other scientists to help Rasmussen develop a synthetic muscle for robotics and prosthetics that expands and contracts like a human muscle. The material was on board the Dragon spacecraft atop the Falcon 9 rocket when it blasted off from NASA's Cape Canaveral to the International Space Station on April 14. The material will remain on the space station for 90 days to test how well it stands up to space radiation.

In addition to the synthetic muscle project, Meixler worked with inventors on dozens of technologies, including a Miniature Integrated Nuclear Detection System, or MINDS, that can detect radioactive materials used in dirty bombs; a method to pasteurize eggs using radio frequency waves; and a diamond wire cutting technology that was first used to disassemble the Tokamak Fusion Test Reactor and was later used by companies to disassemble large machines.

"I am very grateful to the Laboratory for the opportunity to be able to spend the last almost 40 years of my career at such an exciting, collegial and intellectually exciting environment, working with so many incredibly intelligent and dedicated people who are devoting themselves to solving

one of the most important environmental challenges facing the world," Meixler said at the farewell celebration in March marking his retirement.

Meixler graduated from the City College (now University) of New York with a bachelor's degree in electrical engineering and received a master's degree in electrical engineering from Rutgers University in 1972. Before coming to PPPL he worked at the RCA Astro-Electronics Division designing spacecraft and ground-station electronics. When he first came to the Lab in 1975, Meixler worked on designing electronic equipment for the Lab's major experiments, including the fiber-optic monitoring system and the tritium area monitors for TFTR.

An inventor with five patents

He is an inventor himself who holds five patents, starting with a crystal stabilized voltage controlled oscillator used on Navy navigational satellites. It served as a kind of early GPS for Navy ships. His experience patenting his own inventions got him interested in patents. He took and passed the Federal Patent Bar Examination and became a registered patent agent before becoming head of Technology Transfer in 1991.

Meixler has served on the executive board of the Federal Laboratory Consortium (FLC), where he spent two terms as financial chair and five years as regional coordinator for the FLC Northeast Region, winning the Harold Metcalf Award for service to the FLC in 2012.

"He was a very positive advocate for the Lab," said DeLooper. "He was a great ambassador to represent the Laboratory and put our name on the table. He really took that mission to heart."

Meixler married his high school sweetheart, Deb, shortly after they graduated from college. The East Windsor couple has been married for nearly 50 years. They have two grown children, Marci, a professor of environmental science at Rutgers, and Michael, who has his own IT company; and five grandchildren ranging from 1 to 14 years old, all living in the area. He looks forward to spending more time with the grandkids and having time for his hobbies. He is head of the Central Jersey Jewish Genealogy Club and is an avid amateur gardener.

New responsibilities

Bagley's new job comes with additional responsibilities. Besides overseeing technology transfer, Bagley is in charge of patents and publications and the Laboratory's records program. This last responsibility stems from new government regulations that require open access to information, meaning that researchers who publish articles must be able to provide the original article or data through web links.

Bagley said she faces some challenges in marketing technology developed at PPPL because the technology tends to be narrowly focused. However, some research is aimed at a broader audience and there is great potential for doing so at the nanotechnology laboratory, Bagley said. "I love a challenge," she said. "I love learning new things every day and that's exactly what this job is, finding out exactly what's going on and trying to market it."

Bagley said she would like to see more inventions at PPPL. "Anybody can be an inventor who works here," she said. "You don't have to be a scientist."

[concluded on next page](#)

Head of Technology Transfer

continued from page 3

Background as a research chemist

Bagley brings her own background as a research chemist and entrepreneur to the position. She grew up in Lancaster, Pennsylvania, and graduated from Millersville University in Pennsylvania with a degree in chemistry. After graduating, she worked as a chemist and a research chemist at various companies. She was a senior scientist at Johnson & Johnson in New Brunswick, where she led the team that developed a vinyl formulation for Band-Aid® bandages.

After several years in the industry, Bagley and some colleagues formed their own consulting company, the BHT Group, LLC. It worked on licensing and patents for numerous clients including L’Oreal, Bristol Myers Squibb, and J&J. But Bagley said the company ultimately failed because of increased security after the 9/11 attacks that made it difficult to mail information. For a time, companies refused to accept unsolicited marketing mailings.

Bagley has been married to her husband Dan, a toxicologist at Colgate Palmolive, for 25 years. The couple live in Kendall Park in South Brunswick and have two children: Joshua, 22, who is working in finance for L’Oreal, and Cara, a junior majoring in mechanical engineering at Lehigh University. Cara will work at PPPL this summer in the Science Undergraduate Laboratory Internship program..

In her spare time, Bagley likes reading and outdoor activities like biking. She plays the French horn in the Somerset Valley Orchestra and volunteers with the American Red Cross and at the Princeton Healthcare System Hospice.

Bagley has relished meeting new people at the Laboratory. “I enjoy the people first and foremost and finding out what technologies are being developed,” she said. 🍷

PPPL’s EPEAT award



PPPL’s Kristen Ferraro and Robert Frisbee, the CEO of the Green Electronics Council, hold the EPEAT Purchaser Award PPPL received for its green purchasing program at the DOE’s Forrestal West Plaza in Washington D.C. Ferraro accepted the award on behalf of PPPL at an Earth Day ceremony at DOE headquarters on April 22.

Communiversity

continued from page 1

PPPL's exhibit at Princeton University's Communiversity Festival of the Arts on April 26 was a great success this year as hundreds of people flocked to try out hands-on science demonstrations and talk to physicists, engineers and other PPPL staff members. More than a dozen volunteers staffed the booth giving out 600 orange string bags and shopping bags and 400 frisbees, all with the PPPL logo. Communiversity brought more than 200 artist, crafters, and vendors to Princeton and drew more than 40,000 people from all over the state.

Communiversity volunteers who came out to help on a beautiful Sunday afternoon were: Deedee Ortiz and her children, Jason and Christopher; John DeLooper, David Gates, Henry Carnevale, Devon Battaglia, Louis Clervoyant, Yuhu Zhai, Atiba Brereton, Stuart Hudson, Ed Startsev, Russ Feder and his sons Brandon and Justin, Jeanne Jackson DeVoe, John Greenwald and Elle Starkman. 📷



Yuhu Zhai shows a visitor the ITER model.



Louis Clervoyant shows a boy an experiment involving an electromagnet.



A group of children is fascinated as John DeLooper shows them how a balloon expands in a vacuum chamber.



Deedee Ortiz shows Arman Ahmed, 10, and his brother Rehan, 7, of Cranbury, the Van De Graaf generator as father Shakeel Ahmed looks on.



Justin Feder, age 8, shows a spectrometer to his friend Peyton Stauffer, age 6.

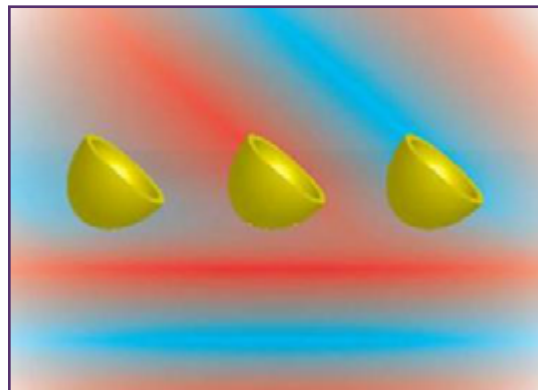


Students check out the plasma ball.

Photos by Jeanne Jackson DeVoe and Elle Starkman

COLLOQUIUM

Metamaterials



Professor Gennady Shvets
The University of Texas at Austin

Wednesday, May 6

4:15 p.m. (coffee/tea at 4 p.m.), M.B.G Auditorium, Lyman Spitzer Building

Remembrances of Val Logsdon Fitch (1923 -2015)

Friday May 15, 2015

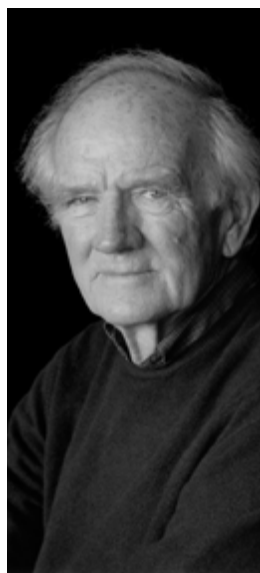


Photo © Mariana Cook 2003.

The Princeton Physics Department is hosting a day of events on Friday May 15, in celebration of Val Fitch's extraordinary life and accomplishments. We very much hope you will be able to join us - for more information please take a look at the University website: <http://www.princeton.edu/main/news/archive/S42/92/81176/index.xml?section=announcements>

Also, please forward this announcement to others who may be interested.

The day will begin with a symposium of colloquium-level talks in Jadwin Hall, on the approximate theme "CP Violation past, present and future."

The afternoon program, for the general public, will take place in Richardson Auditorium in Alexander Hall, featuring a concert interspersed with tributes, to be followed by a reception in the adjacent Mathey College Common Room. Please register on the following website, to give us an idea of how many people will be coming: <http://phy-webserver.princeton.edu/indico/internalPage.py?pageId=0&confId=4>

An obituary of Val Fitch is available at: <http://www.princeton.edu/main/news/archive/S42/32/62C77/index.xml?section=topstories>.

Science Symposium, Room A10 Jadwin Hall

10 a.m.

Coffee, foyer in front of Jadwin A10

10:15 a.m.

Val Fitch as scientist and human being

Stewart Smith, Princeton University

10:30 a.m.

The Discovery of CP Violation: Remembrances after 50 years!

James Cronin, University of Chicago

11:15 a.m.

Break

11:30 a.m.

CP Violation in the 21st Century

Hassan Jawahery, University of Maryland

12:15 p.m.

CP Violation and Cosmology

Edward Witten, Institute for Advanced Study

12:50 p.m.

Lunch - list of suggestions will be provided

Memorial Concert and Tributes, Richardson Auditorium, Alexander Hall

2:30-3:45 p.m.

Speakers: Linda Fitch, James Cronin and Alan Fitch

Musical Selections — Salomé Chamber Orchestra, New York

- Bach, Suite #3 in D Major, Adagio
- Schubert, Quintet in C Major, Movement 1
- Schubert, Quintet in C Major, Movement 2
- Händel, Xerxes -- Ombra mai fu

4:00-5:30 p.m.

Light reception, Mathey College Common Room

Join PPPL's bikers during the May Bike to Work Challenge

May is National Bike Month and PPPL is once again urging bikers of all kinds to leave their cars at home and bicycle to work as part of the Bike to Work Month Challenge from May 1 to May 31, hosted by the Cascade Bicycle Club.

To join, all you have to do is sign up at <http://tinyurl.com/k6huwz7>. You'll be invited to join one of PPPL's teams and to register on the Bike Month Challenge website. The website

will be used to track your bike rides during May and that information can be used to tally the number of miles ridden, number of new riders, and how much PPPL's bike riders saved in carbon dioxide emissions.

PPPL's Bike to Work group is planning a "Bike Maintenance 101" clinic with Princeton University's CycLab campus bike shop and a gathering at the end of the month to celebrate the Bike to Work Challenge.

For more information, please contact Rob Sheneman at ext. 3392.

BROCK

MARK GAZO
Chef Manager



BREAKFAST 7 a.m. • 10 a.m.

CONTINENTAL BREAKFAST 10 a.m. • 11:30 a.m.

LUNCH 11:30 a.m. • 1:30 p.m.

SNACK SERVICE until 2:30 p.m.

	Monday May 4	Tuesday May 5	Wednesday May 6	Thursday May 7	Friday May 8
COMMAND PERFORMANCE Chef's Feature	Ota-Ya Made to Order Sushi	Beef Tacos with Mexican Rice & Refried Beans	Command Performance Pasta Bar	Eggplant Parmesan served with Tomato Mozzarella Salad and Breadstick	Cajun Tilapia Served with Garlicky Spinach & Oven-Roasted Potato Wedges
Early Riser	Mushroom, Onion & Mozzarella Omelet with Home Fries	Tex Mex Scramble with Shredded Beef, Pepper Jack, Tomato, Jalapeno, Onion & Fried Tortilla Strips	Corned Beef Hash & Egg Wrap with Hash Browns	Pineapple Coconut Pancakes with Ham Steak	Fried Spaghetti with Scrambled Eggs & Cheddar Cheese
Country Kettle	Potato Leek with Cabbage	Tomato Orzo	Creamy Vegetable	Beef Noodle	Stuffed Cabbage Soup
Grille Special	Cheese Burger with Onion Ring, Mushroom, Pepperoni, Sweet Peppers & American Cheese	Shredded Chicken Tostada Served with Rice	Krabby Kake Sandwich	Grilled Ham & Cheddar on Texas Toast	Veggie Burger with Mushrooms, Sweet Peppers, & Swiss Cheese on a Wheat Bun
Deli Special	Black Bean Quesadilla with Zucchini & Chopped Tomatoes	Chicken, Chipotle Mayo, Avocado & Pepper Jack Cheese on a Kaiser	Ham, Salami, Capicola & Provolone Hoagie	Hot Roast Beef on a Soft Bun with Horseradish Mayo, & Provolone & American Cheese	Chicken Breast on a Kaiser Roll with Goat Cheese & Sundried Tomatoes & Tarragon Mayonnaise
Panini	Turkey Meatloaf with BBQ Sauce, Cheddar Cheese, Lettuce & Tomato	Grilled Veggies, Refried Beans & Cheddar Cheese Quesadilla	Chicken Breast Reuben with Swiss Cheese, Sauerkraut & Russian Dressing on Rye	Lobster Roll	Philly Fries-French Fries smothered with Cheesesteak, Peppers, Onions and Cheese Wiz

MENU SUBJECT TO CHANGE WITHOUT NOTICE

Menu Item is in keeping with American Heart Association (AHA) and U.S. Department of Agriculture (USDA) guidelines.

VEGETARIAN OPTION

WEEKLY

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Photography: **Elle Starkman** ♦ Science Editor: **John Greenwald** ♦ Webmaster: **Chris Cane**

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DEADLINE for calendar item submissions is noon on WEDNESDAY. Other stories should be submitted no later than noon on TUESDAY.

Comments: commteam@pppl.gov ♦ PPPL WEEKLY is archived on the web at: <http://w3.pppl.gov/communications/weekly/>.